Planesticus migratorius popinquus.—Western Robin.

Only a few were seen in town during our stay. They were sitting quietly in the trees.

Sialia currucoides.—Mountain Bluebird.

A roving flock seen February 19. Irregular winter visitant.

AN UNUSUAL FLIGHT OF WARBLERS IN THE MISSOURI VALLEY.

BY T. C. STEPHENS

An especially interesting flight of warblers was noted at Sioux City during the spring of 1913. The wave apparently first reached this point on May 8, but was more marked on the 9th and reached its maximum on the 14th and 15th. My records show that there had been a good deal of rain and cloudy weather prior to the arrival of the wave. May 3 was mostly cloudy, and was followed by three clear days. May 7 was cloudy and rainy; the 8th and 9th were cloudy and cold with some rain. On the 10th it cleared up but was still cool. By the 13th it was still clear, but was cloudy again on the 14th and 15th with rain both nights. An analysis of the weather conditions cannot be further attempted for more complete data covering a greater extent of the Missouri valley would be required to reach any significant facts. It will be noticed, however, that the warblers were present in considerable numbers during both clear and cloudy or cool weather.

The records when arranged as in the accompanying table show at a glance the wave as it came under the writer's observation. To many it may seem quite meager, but nothing like it has been witnessed by the writer in the five years of his observations at this point. The abundance of these small birds with bright colors attracted the attention of many people who were not accustomed to notice birds. Some more or less regular migrants of other years are singularly absent from the list, viz, the Palm Warbler, and the Mourning Warbler. The list is made up of records on both sides of

the Missouri river, in Nebraska and Iowa, but no distinction is made for the present purpose. May 10 and 17 represent all-day field trips; on the other days observations were entirely on the College campus and its immediate vicinity.

With the exception of a few of the species which breed in this locality, such as the Yellow warbler, the Redstart, the Maryland Yellow-throat, and the Yellow-breasted Chat, the Tennessee Warbler was the only one which I heard in song.

Below are a few notes on each species which are intended to show briefly the general status of these warblers in this vicinity in order that this year's records may have a proper setting.

1. Myrtle Warbler (*Dendroica coronata*).—This is a regular and very common migrant every year. This season, however, it was not observed with quite the usual frequency.

2. Yellow Warbler (*Dendroica æ. æstiva*).—A most abundant summer resident.

3. Black-poll Warbler (*Dendroica striata*).—A regular and common migrant in the spring, and more or less common also in the fall.

4. Black and White Warbler (*Mniotilta varia*).—This unobtrusive little warbler seems to be quite irregular from year to year. In 1912 it did not come under my observation at all. To see two or three in a single day, and without making any special search, makes this species seem almost abundant.

5. Black-throated Green Warbler (*Dendroica virens*).—Was noted several times. It has been observed occasionally in other years and is probably a regular migrant, although by no means common.

6. Wilson Warbler (*Wilsonia p. pusilla*).—Would be considered tolerably common this season. It was observed on a number of occasions, and in widely separated areas. Up to this year I have regarded this species as rather rare. While specimens were not taken, I hardly think there is any possibility of our having confused this bird with the Pileolated Warbler (*W. p. pileolata*), whose range is said to reach Nebraska. These warblers impress one with their activity, and their habit of picking insects from leaf or flower while pausing on the wing. Several years ago I saw one chased into a thicket by a small hawk, probably a sharp-shinned.

7. Redstart (*Setophaga ruticilla*).—A regular and tolerably common migrant, and occasionally breeding here. This year their

numbers seemed greatly augmented during the few days of migration.

8. Maryland Yellow-throat (*Geothlypis t. trichas*).—The form found here is often referred to as *G. t. brachidactyla*. It is a very common summer resident, and was present this spring in about the usual numbers.

9. Grinnell Water-Thrush (*Seiurus noveboracensis notabilis*).—A migrant. The Water-Thrushes were seen more frequently than my records show, because it was often difficult at a distance to satisfy one's self of the identity of this species from *S. motacilla*. I suspect, however, that if circumstances had taken me more often to its natural haunts it would have been found to be tolerably common. One of my records this year was obtained on the College campus, several miles from the nearest water.

10. Magnolia Warbler (*Dendroica magnolia*).—This species furnished one of the surprises. On the basis of my own observations I have considered this species rare in this region. This year, however, it must be credited with being abundant during the few days of its passage. It was observed practically every day and was well distributed. More inquiries were made about this little bird than all the other warblers put together.

11. Oven-bird (*Seiurus aurocapillus*).—This bird is considered a common resident here by other observers, and I have been chagrined not to have seen it until this spring. However, one of my records this season was made on the College campus, and another in a private yard a few blocks away. The other records were secured in the field where they might be expected.

12. Blackburnian Warbler (*Dendroica fusca*).—This must be rather a rare species for the Missouri valley. I have not before come across it, and no record of its occurrence in western Iowa appears in Anderson's *Birds of Iowa*. Bruner, Walcott and Swenk credit Aughey with having occasionally found it in eastern Nebraska. A few records of its occurrence in the lower Missouri valley are given in Widman's *Birds of Missouri* (p. 229). I can add a positive record for Sioux City, May 13, 1913. On the following day Mr. Arthur Lindsey saw two on the College campus.

13. Tennessee Warbler (*Vermivora peregrina*).—A regular and abundant migrant. I believe that, from year to year, this warbler will stand second only to the Yellow Warbler in abundance. Its migration seems to cover a longer period than other members of the family.

14. Cape May Warbler (*Dendroica tigrina*).—It seems to be generally agreed that this species is rather rare in most of the interior, at least. Two records are published from Nebraska, but

none from western Iowa. On May 14 I observed one in a cherry tree on the College campus and was able to make a positive identification. On the following day I was called to the office of Mr. Peters to see a captive bird which had been picked up from the street under some wires. It proved to be a male Cape May Warbler. As it had apparently recovered from any shock or injury Mr. Peters released it.

15. Chestnut-sided Warbler (*Dendroica pensylvanica*).—I do not get to see this species more than once or twice in a season. I noted it in 1909 and 1910, but missed it entirely in 1911 and 1912.

16. Nashville Warbler (*Vermivora r. rubricapilla*).—I have no other records of this species except those of this season.

17. Bay-breasted Warbler (*Dendroica castanea*).—The only previous record of mine is of June 4, 1910, on the College campus. This year Miss Pearl Woodford told me of seeing one at Sergeant Bluff on May 10. On the 14th Mr. Arthur Lindsey saw two on the campus; on the 15th I saw one; and on the 18th one was reported to me by Paul Chipperfield.

18. Louisiana Water-Thrush (*Seiurus motacilla*).—While only a few records appear in the table, it seems to be the more common of the two Water-Thrushes.

19. Yellow-breasted Chat (*Icteria v. virens*).—Not by any means common from year to year. This year my two records are probably of the same bird, or of a pair.

Sioux City, Ia.